

ABSTRACT

A silicon single crystal ingot is pulled at a pull rate so that the interior of the ingot results in a perfect region in which agglomerates of interstitial silicon-type point defects and agglomerates of vacancy-type point defects are absent, while rotating a quartz crucible for storing a silicon melt at a predetermined rotation speed and rotating the ingot pulled from the silicon melt in the opposite direction to the rotation of the quartz crucible at a predetermined rotation speed. An average rotation speed CR_{TAV} of the quartz crucible during the pulling of a top ingot portion is set to be faster than an average rotation speed CR_{TAV} of the quartz crucible during the pulling of a bottom ingot portion of the silicon single crystal ingot.